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U. S. DEPARTMENT OF AGRICULTURE
Extension Service
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A Summary of the Exhibit.

Department of Agriculture

VALUE OF PASTEURIZATION

The exhibit shows the usefulness of pasteurization as a safeguard against typhoid fever; and general facts which everybody should know about the process.

SPECIFICATIONS.

Floor space required	width	11 ft.
	depth	4 "
Wall space required		None
Shipping weight		544 lbs.
Electrical requirements		None

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VALUE OF PASTEURIZATION

How It Looks

The center section of this exhibit shows, by means of a diagrammatic painted scene, supplemented by cutouts, why pasteurization of milk is so important. The scene shows two cities, one dairy farm, and a pasteurizing plant.

The diagram by means of ribbons, traces delivery of raw milk from the dairy to individual homes in city A, also to the pasteurizing plant, and subsequently to the homes in city B. The exhibit is so arranged as to make it appear as a view from a window of a home. The background is a painting, and a few trees and shrubs are shown as cut-outs in the foreground.

The left section is devoted to text giving the definition of pasteurization of milk, and two charts, one showing the effect of pasteurization upon the chemical composition of milk, and the other its effect upon the vitamins.

The right section shows graphically, by means of bars of different lengths, the percentage of pasteurized milk in cities of different sizes. The lower half of this section is devoted to text which gives four important facts about pasteurization.

What It Tells

As applied to milk, the primary object of pasteurization is the destruction of any disease germs which may be present. The holder process, which is the one most extensively used in this country, consists of heating milk to 145 degrees F., held for 30 minutes, and then cooled in the bottle. This process has

many points to commend it. Neither of these processes injures the milk.

A very striking evidence of the value of pasteurization is shown in the exhibit. This is an accidental experiment which showed the usefulness of pasteurization as a safeguard against typhoid fever. The milk from one farm went to two cities. In one of these cities the milk was sold raw and in the other it was pasteurized. In the city which had the raw milk, 12 cases of typhoid fever developed which were traced to the milk from that farm; but no cases developed in the other city, where the milk from the same farm was pasteurized. Investigation brought out that a milker on the farm had typhoid fever and infected the milk. Pasteurization saved one city from an epidemic.

How pasteurization is increasing in a number of cities varying in size, population 10,000 to 500,000, is shown by the following table:

<u>1915</u>	<u>Population of Cities</u>	<u>1924</u>
<u>Per Cent</u>		<u>Per Cent</u>
77.8	Over 500,000	100.0
30.0	100,000 - 500,000	91.9
26.3	75,001 - 100,000	73.6
12.3	50,001 - 75,000	80.0
16.7	25,001 - 50,000	80.0
6.0	10,001 - 25,000	45.7

Some cities require the pasteurization of all milk except certified or equivalent grades. Experience with pasteurization may be summed up as follows;

1. No epidemics have been traced to properly pasteurized milk.

2. Proper pasteurization destroys the pathogenic organisms sometimes found in milk.

3. After pasteurization, milk is handled by so few people before it reaches the consumer that it can be protected against further infection by frequent medical inspection of the small number of people concerned.

4. Tuberculin testing properly used is a safeguard against bovine tuberculosis, but does not protect against typhoid fever, diphtheria, septic sore throat, and other milk-borne diseases. This emphasizes the need for pasteurization.

5. The only change in milk caused by pasteurization is the reduction of vitamin C. This deficiency is easily supplied by feeding tomato or orange juices.

Where to Get Information

For further information send for U. S. Department of Agriculture Bulletin 342, - The Present Status of the Pasteurization of Milk.